

Sealing Requirements

14.5 Sealing Requirements

14.5.1 Sump pits that permit entry of soil-gas or that would allow conditioned air to be drawn into a sub-slab depressurization system shall be covered and sealed. The covers on sumps that previously provided protection or relief from surface water collection shall be fitted with a water or mechanically trapped drain. Water traps should be fitted with an automatic supply of priming water. (See paragraph 15.7 for details on sump cover and sealing materials.)

14.5.2 Openings around radon vent pipe penetrations of the slab, the foundation walls, or the crawlspace soil-gas retarder membrane shall be cleaned, prepared, and sealed in a permanent, air-tight manner using compatible caulks or other sealant materials. (See paragraph 15.5.) Openings around other utility penetrations of the slab, walls, or soil-gas retarder shall also be sealed.

14.5.3 Where a Block Wall Depressurization (BWD) system is used to mitigate radon, openings in the tops of such walls and all accessible openings or cracks in the interior surfaces of the walls shall be closed and sealed with polyurethane or equivalent caulks, expandable foams, or other fillers and sealants. (See paragraphs 15.5 and 15.6.) Openings or cracks that are determined to be inaccessible or beyond the ability of the contractor to seal shall be disclosed to the client and included in the documentation.

14.5.4 Openings, perimeter channel drains, or cracks that exist where the slab meets the foundation wall (floor-wall joint), shall be sealed with urethane caulk or

equivalent material. When the opening or channel is greater than 1/2 inch in width, a foam backer rod or other comparable filler material shall be inserted in the channel before application of the sealant. This sealing technique shall be done in a manner that retains the channel feature as a water control system. Other openings or cracks in slabs or at expansion or control joints should also be sealed. Openings or cracks that are determined to be inaccessible or beyond the ability of the contractor to seal shall be disclosed to the client and included in the documentation.

14.5.5 When installing baseboard-type suction systems, all seams and joints in the baseboard material shall be joined and sealed using materials recommended by the manufacturer of the baseboard system. Baseboards shall be secured to walls and floors with adhesives designed and recommended for such installations. If a baseboard system is installed on a block wall foundation, the tops of the blockwall shall be closed and sealed as prescribed in paragraph 14.5.3.

14.5.6 Any seams in soil-gas retarder membranes used in crawlspaces for sub-membrane depressurization systems shall be overlapped at least 12 inches and should be sealed. To enhance the effectiveness of sub-membrane depressurization systems, the membrane should also be sealed around interior piers and to the inside of exterior walls.

14.5.7 In combination basement/crawlspace foundations, where the crawlspace has been confirmed as a source of radon entry, access doors and other openings between the basement and the adjacent crawlspace shall be closed and

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sealed. Access doors required by code shall be fitted with air tight gaskets and a means of positive closure, but shall not be permanently sealed. In cases where both the basement and the adjacent crawlspace areas are being mitigated with active SSD and SMD systems, sealing of the openings between those areas is not required.

14.5.8 When crawlspace depressurization is used for radon mitigation, openings and cracks in floors above the crawl-space which would permit conditioned air to pass out of the living spaces of the building, shall be identified, closed, and sealed. Sealing of openings around hydronic heat or steam pipe penetrations shall be done using non-combustible materials. Openings or cracks that are determined to be inaccessible or beyond the ability of the contractor to seal shall be disclosed to the client and included in the documentation.